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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,465	01/26/2005	Alexandre Humbertsot	FR 020078	6148
65913	7590	03/19/2008		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER TAYONG, HELENE E	
			ART UNIT 2611	PAPER NUMBER
			NOTIFICATION DATE 03/19/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/522,465	<b>Applicant(s)</b> HUMBERSOT, ALEXANDRE	
	<b>Examiner</b> HELENE TAYONG	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 7 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/26/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 7 and 10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.
2. Claim 9 is object to because it is dependent on a reception method which is claim 8. The Examiner suggest changing claim 9 to be dependent on claim 8 instead of claim 7. The examiner also interpreted claim 9 to be dependent on claim 8. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In claim 10, a “program containing instructions” is being recited; however, a program containing instructions would reasonably be interpreted by one of ordinary skill in the art as software per se. This subject matter is not limited to that which falls within a statutory category of invention (i.e. it is not a process, machine, manufacture, or a composition of matter). Software is functional descriptive material and functional descriptive material is non-statutory subject matter.

Computer programs claimed as computer per se, i.e., the description or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-842 32 USPQ2d at 1035.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dedieu et al (US 6879643).

(1) with regards to claims 1 and 8;

Dedieu et al discloses a device (fig. 1, TZIF) for receiving (RS) an analog signal (from antenna) having a spectrum situated in a given frequency band higher than a

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reference band centered around zero, referred to as the baseband, the device comprising ( col. 5, lines 20-34 and lines 57-65) :

reception means (fig. 1, RS) which manage at least one narrow-band noise signal located around a given noise frequency (CMOS technology, col. 5, lines 28-30), comprising a plurality of parallel baseband conversion means ( MXA and MXB) defining a plurality of reception channels (I path and Q path) for converting the spectrum of the signal received into reception bands close to the baseband and shifted relative to one another so that ( IQPLL), on each reception band (I path and Q path), the narrow-band noise signal is superimposed (CMOS technology, col. 5, lines 28-30),

recombination means for constructing (fig. 1, BT), from the many shifted spectra of the received signal on each reception channel (I path and Q path), a single spectrum corresponding to the spectrum of the received signal with the effect of the narrow-band noise removed and situated in a frequency band close to the baseband ( col. 6, lines 11-18).

Dedieu et al discloses all of the subject matter discussed above, but for specifically teaching shifted spectrum of the signal received at distinct points relative to said spectrum.

It is known in the art that the majority of typical receivers perform frequency translation or mixing using an oscillator and an analog multiplier or mixer. An oscillator will typically output a local oscillator (LO) signal in the form of a sine wave or periodic wave having a tuned frequency ( $f_{LO}$ ). A mixer then mixes the RF input signal spectrum, which includes desired content at a target channel having a particular center frequency

( $f_{CH}$ ), with the (LO) signal to form an output signal having spectral content at frequencies equal to the sum and difference of the two input frequencies, namely ( $f_{CH} + f_{LO}$ ) and ( $f_{CH} - f_{LO}$ ). One of these components forms the channel center frequency translated to the desired IF frequency, and the other component can be filter out.

It would have been obvious to one of ordinary skill at the time of the invention to have been able to shift the spectrum of the signal received at distinct points relative to said spectrum for example ( $f_0 + \frac{\pi}{4}$ ), ( $f_0 - \frac{\pi}{4}$ ) or ( $f_0 + \frac{\pi}{2}$ ), ( $f_0 - \frac{\pi}{2}$ ).

(2) with regards to claims 2 and 9;

Dedieu et al further discloses the baseband conversion means (MXA and MXB) are designed to shift the spectrum of the received signal symmetrically with respect to the zero frequency (col. 5, lines 37-65).

(3) with regards to claims 3 and 4;

Dedieu et al further discloses the reception means ( fig. 1, RS) manage a single narrow-band noise signal located around a given noise frequency ( CMOS technology, col. 5, lines 27-30) and comprise, on a first reception channel (I path) , first baseband conversion means (MXA) for converting the spectrum of the received signal in a first reception band close to the baseband centered around a first reception ( col. 5, lines 39-65) frequency and on a second reception channel (Q path), second baseband conversion means (MXB) for converting the spectrum of the received signal in a second reception band close to the baseband centered around a second reception frequency (

col. 5, lines 39-65) and the recombination means (BT and col. 6, lines 11-18) comprise:

on one of the two channels (I path and Q path), filtering (FPBAO) means for filtering the received signal in a first frequency band around the noise frequency, on the other channel, and filtering means (FPBBO) for filtering the received signal outside a second frequency band centered around said noise frequency (col. 5, lines 65-67 and col. 6, lines 1-10), addition means (implicitly disclosed in fig. 1, BT) for adding the signals coming from said first and second reception channels (col. 6, lines 11-18).

Dedieu et al discloses all of the subject matter discussed above, but for specifically teaching shifted spectrum of the signal received at distinct points relative to said spectrum.

It is known in the art that the majority of typical receivers perform frequency translation or mixing using an oscillator and an analog multiplier or mixer. An oscillator will typically output a local oscillator (LO) signal in the form of a sine wave or periodic wave having a tuned frequency ( $f_{LO}$ ). A mixer then mixes the RF input signal spectrum, which includes desired content at a target channel having a particular center frequency ( $f_{CH}$ ), with the LO signal to form an output signal having spectral content at frequencies equal to the sum and difference of the two input frequencies, namely ( $f_{CH} + f_{LO}$ ) and ( $f_{CH} - f_{LO}$ ). One of these components forms the channel center frequency translated to the desired IF frequency, and the other component can be filter out.

It would have been obvious to one of ordinary skill at the time of the invention to have been able to shift the spectrum of the signal received at distinct points relative to

said spectrum for example  $(f_0 + \frac{\pi}{4}), (f_0 - \frac{\pi}{4})$  or  $(f_0 + \frac{\pi}{2}), (f_0 - \frac{\pi}{2})$ .

(4) with regards to claim 5/1;

Dedieu et al further discloses a digital television receiver (fig. 1) comprising a device (TZIF) (col. 5, lines 1-3 and lines 63-65).

(5) with regards to claim 5/2;

Dedieu et al further discloses a digital television receiver (fig. 1) comprising a device (TZIF) (col. 5, lines 1-3 and lines 63-65).

(6) with regards to claim 5/3;

Dedieu et al further discloses a digital television receiver (fig. 1) comprising a device (TZIF) (col. 5, lines 1-3 and lines 63-65).

(7) with regards to claim 5/4/2/1;

Dedieu et al further discloses a digital television receiver (fig. 1) comprising a device (TZIF) (col. 5, lines 1-3 and lines 63-65).

(8) with regards to claim 6/1;

Dedieu et al further discloses a multimedia receiver (fig. 1) comprising a device (TZIF) as claimed in claim 1(col. 5, lines 1-3 and lines 63-65).

(9) with regards to claim 6/2;

Dedieu et al further discloses a multimedia receiver (fig. 1) comprising a device (TZIF) as claimed in claim 1(col. 5, lines 1-3 and lines 63-65).

(10) with regards to claim 6/3;

Dedieu et al further discloses a multimedia receiver (fig. 1) comprising a device (TZIF) as claimed in claim 1(col. 5, lines 1-3 and lines 63-65).



(11) with regards to claim 6/4/2/1;

Dedieu et al further discloses a multimedia receiver (fig. 1) comprising a device (TZIF) as claimed in claim 1(col. 5, lines 1-3 and lines 63-65).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (US 6169733) discloses a multiple mode capable radio receiver device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE TAYONG whose telephone number is (571)270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information

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Examiner, Art Unit 2611

3/11/08

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